

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2005/000961

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/82 C07K14/415 C12N5/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, MEDLINE, WPI Data, PAJ, EMBASE, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/081707 A (BAE HYUNJOO ; LEE JOOHYUN (KR); LEE YOUNGSOOK (KR); POSCO (KR); HWA) 17 October 2002 (2002-10-17) cited in the application abstract	1,2,6, 10,12, 15-18, 20-28, 3-5,8,9, 11
Y	page 1, line 8 - line 11 page 4, line 20 - line 21 page 10, line 10 - line 17 page 11, line 13 - page 12, line 11 page 12, line 12 - line 18 example 3 ----- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

15 June 2005

Date of mailing of the international search report

23/06/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>GRAVOT A ET AL: "AthMA3, a plant PIB-ATPase, functions as a Cd/Pb transporter in yeast" FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 561, no. 1-3, 12 March 2004 (2004-03-12), pages 22-28, XP004495447 ISSN: 0014-5793 page 22, left-hand column, line 11 - line 14 the whole document</p>	3-5,11
Y	<p>MILLS REBECCA F ET AL: "Functional expression of AthMA4, a PIB-type ATPase of the Zn/Co/Cd/Pb subclass." THE PLANT JOURNAL: FOR CELL AND MOLECULAR BIOLOGY. ENGLAND JUL 2003, vol. 35, no. 2, July 2003 (2003-07), pages 164-176, XP002287816 ISSN: 0960-7412 cited in the application page 164, right-hand column, line 1 - line 4 the whole document</p>	3-5,11
Y	<p>SONG WON-YONG ET AL: "Engineering tolerance and accumulation of lead and cadmium in transgenic plants." NATURE BIOTECHNOLOGY, vol. 21, no. 8, August 2003 (2003-08), pages 914-919, XP002287817 ISSN: 1087-0156 (ISSN print) the whole document</p>	8
Y	<p>KÄRENLAMPI S ET AL: "Genetic engineering in the improvement of plants for phytoremediation of metal polluted soils" ENVIRON POLLUT;ENVIRONMENTAL POLLUTION 2000 ELSEVIER SCIENCE LTD, ENGL, vol. 107, no. 2, 2000, pages 225-231, XP002287818 page 227, paragraph 3.2</p>	9
A	<p>SINGH O V ET AL: "Phytoremediation: an overview of metallic ion decontamination from soil" APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, SPRINGER VERLAG, BERLIN, DE, vol. 61, 26 February 2003 (2003-02-26), pages 405-412, XP002982032 ISSN: 0175-7598</p>	1-28
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WILLIAMS L E ET AL: "Emerging mechanisms for heavy metal transport in plants" BIOCHIMICA ET BIOPHYSICA ACTA. BIOMEMBRANES, AMSTERDAM, NL, vol. 1465, no. 1-2, 1 May 2000 (2000-05-01), pages 104-126, XP004273203 ISSN: 0005-2736 cited in the application the whole document</p> <p style="text-align: center;">-----</p>	1-28

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 02081707 A	17-10-2002	CN 1551921 A	01-12-2004
		EP 1373523 A1	02-01-2004
		JP 2004533231 T	04-11-2004
		WO 02081707 A1	17-10-2002
		KR 2002077832 A	14-10-2002
		US 2004098759 A1	20-05-2004
